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EXAMINER

SEKUL, MARIA LYNN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,820	Applicant(s) SEBIRE ET AL.	
	Examiner MARIA L. SEKUL	Art Unit 2461	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1 and 5-12 is/are rejected.
- 7) ☐ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. With respect to Applicant's footnote regarding reference to "WG1#10" in the office action rather than Tdoc TSG RAN WG1#11 R1-00-0302 (hereinafter "WG1#11"), both documents being cited in the Information Disclose Statement (IDS) dated July 28, 2006, Examiner appreciates the remarks and has made necessary corrections to reference WG1#11 where appropriate.
2. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 2461

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. **Claims 1, 5, 6, 8, 9, 11 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **3GPP TSG RAN Working Group 1 Meeting No. 11 (Tdoc R1-00-0302), as cited in the Information Disclosure Statement (IDS) dated July 28, 2006** (hereinafter WG1#11) in view of **Admission of Prior Art in Applicant's Specification** ("Applicant's Specification").

As to **claims 1 and 12**, WG1#11 discloses a method comprising:

“determining in a communications device a maximum length of a silent period that is longer than predetermined regular intervals between upper-level scheduled silence-breaking transmissions transmitted over a telecommunications connection by a service that involves transmitting upper-level scheduled silence-breaking transmissions”.

Applicant's admits as prior art that the GSM cellular radio system transmits a silence descriptor once in every 160 milliseconds (**Applicant's Specification, p. 1, line 30-p. 2, line 2**) at the speech codec. Applicant also admits as prior art a second functionality at layer 2 (L2) that generates dummy blocks during silent periods (“upper level scheduled silence-breaking transmissions”). Further the speech codec requires transmission of silence descriptors independently of said dummy blocks. (**Applicant's**

Art Unit: 2461

Specification, p. 2, lines 21-30). Therefore, two (2) different silent periods have been admitted as prior art. When determining the length of the silent period for the speech codec, it would have been obvious to one skilled in the art at the time the invention was made to determine the length of a silent period longer than the L2 scheduled silence, the choices being shorter, equal or longer.

Additionally, WG1#11 discloses that during active mode probing, i.e. when the UE has synchronized and is transmitting data, the broadcast probe is sent only when a UE has no data to send in order to register its active status with its neighbors, i.e. synchronize. This timer *Probe_timer_2* is defined as five (5) times longer than another probe timer as depicted in **Fig. 2**, and is reset after every transmission (**p. 12-13, sec. 4.5.3**). It would have been obvious to use this relationship in which the broadcast timer is longer than the timer used during data transmission as taught in WG1#11 with the timers in Applicant's Specification in order to avoid overlapping excessive transmission since the transmission of data acts as an indication of activity, as stated in WG1#11 (p. 12, sec. 4.5.3).

WG1#11 further discloses "at a layer of a protocol stack governing communication over said telecommunication connection, observing the occurrence of silent periods and transmitting a dummy block over the telecommunication connection when the length of an observed silent period reaches said maximum length without an upper-level scheduled silence-breaking transmission or payload data having been transmitted, wherein said layer is lower in said protocol stack than layers that produce said upper-level scheduled silence-breaking transmissions". WG1#11 discloses that

Art Unit: 2461

the UE is forced to transmit at least once after a $[16]/2-1$ silent frames ("occurrence of silent period"). If after $[16]/2-1$ silent frames no data has to be transmitted ("silent period reached maximum length without an upper-level scheduled silence-breaking transmission"), then a dummy burst shall be generated and transmitted in the next possible frame. (**p. 13, sec. 4.6, ¶ 4**).

As to **claim 5**, WG1#11 in view of Applicant's Specification discloses all of claim 1 and further discloses "controlling in said communications device at least one of maximum length of an observed silent period before transmitting a dummy block and a number of dummy blocks sent after an observed silent period through a parameterised command from an upper layer in said protocol stack" (WG1#11 discloses that the UE is forced to transmit at least once after a $[16]/2-1$ silent frames ("controlling the maximum length of an observed silent period before transmitting a dummy block"), **p. 13, sec. 4.6, ¶ 3-4**).

As to **claims 6 and 9**, WG1#11 discloses "a dummy block functionality configured to transmit dummy blocks from a communications device within a telecommunication connection according to rules" (UE is forced to transmit at least once after a $[16]/2-1$ silent frames, **p. 13, sec. 4.6, ¶ 3-4**); and

"said dummy block functionality comprising a dummy block timing part configured to determine a maximum length of a silent period that is longer than a predetermined regular interval between upper-level scheduled silence-breaking transmissions transmitted by a service that involves transmitting upper-level scheduled silence-breaking transmissions". Applicant's specification discloses the two silence periods as

Art Unit: 2461

discussed in claim 1, above. Further, when determining the length of the silent period, it would have been obvious to one skilled in the art at the time the invention was made to determine the length of a silent period longer than the upper-level scheduled, the choices being shorter, equal or longer.

Additionally, WG1#11 discloses that during active mode probing, i.e. when the UE has synchronized and is transmitting data, the broadcast probe is sent only when a UE has no data to send in order to register its active status with its neighbors, i.e. synchronize. This timer *Probe_timer_2* is defined as five (5) times longer than another probe timer as depicted in **Fig. 2**, and is reset after every transmission (**p. 12-13, sec. 4.5.3**). It would have been obvious to use this relationship in which the broadcast timer is longer than the timer used during data transmission as taught in WG1#11 with the timers in Applicant's Specification in order to avoid overlapping excessive transmission since the transmission of data acts as an indication of activity, as stated in WG1#11 (p. 12, sec. 4.5.3).

WG1#11 also discloses “to trigger the transmission of a dummy block over the telecommunication connection when the length of an observed silent period reaches said maximum length without an upper-level scheduled silence-breaking transmission or payload data having been transmitted” (UE is forced to transmit at least once after a [16]/2-1 silent frames unless the silent period has been broken by a data transmission which would include comfort noise initiated from an upper-layer service, **p. 13, sec. 4.6, ¶ 3-4**).

As to **claim 8**, WG1#11 in view of Applicant's Specification discloses "dummy block functionality forms part of a module in said communications device for implementing Layer 1, 2 and 3 functionalities of a protocol stack governing communication over the telecommunication connection". WG1#11 discloses the dummy burst is filled with an arbitrary bit pattern and by setting the TFCI and TPC bits, which data would be set by a Layer 1, 2 or 3 protocol (**p. 13, sec. 4.6, ¶ 4**).

As to **claim 11**, WG1#11 in view of Applicant's Specification discloses " means for transmitting dummy blocks forms part of a means in said communications device for implementing Layer 1, 2 and 3 functionalities of a protocol stack governing communication over the telecommunication connection". WG1#11 discloses the dummy burst is filled with an arbitrary bit pattern and by setting the TFCI and TPC bits, which data would be set by a Layer 1, 2 or 3 protocol (**p. 13, sec. 4.6, ¶ 4**).

7. **Claims 7 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **3GPP TSG RAN Working Group 1 Meeting No. 10 (Tdoc R1-00-0302)**, submitted as prior art (hereinafter WG1#11) in view of **Admission of Prior Art in Applicant's Specification** ("Applicant's Specification") and further in view of **3GPP TS 26.093 V4.0.0 (2002-12)** (hereinafter TS26.093).

As to **claim 7**, WG1#11 in view of Applicant's Specification discloses all of claim 6 as discussed in paragraph 5 above.

WG1#11 in view of Applicant's Specification does not disclose "signal codec configured to act as a source of information to be transmitted over the telecommunication connection, and said signal codec is also configured to transmit said

Art Unit: 2461

upper-level scheduled silence-breaking transmissions at predetermined regular intervals during otherwise silent periods in a signal to be encoded in the signal codec”.

TS 26.093 discloses codec functionality for transmitting signal identifier description (SID) used for carrying comfort noise information to be used during the silence period and transmitted at regular intervals during silent periods of discontinuous transmission (DTX) (**§ A5.1.1., ¶6-7**).

WG1#11 in view of Applicant’s Specification and TS 26.093 are analogous art because they both deal with discontinuous transmission (DTX).

It would have been obvious to one skilled in the art at the time the invention was made to use the signal codec of TS 26.093 with the method in WG1#11 in view of Applicant’s Specification in order to transmit defined SID information for comfort noise during regular intervals to break the silent period.

As to **claim 10**, WG1#11 in view of Applicant’s Specification discloses all of claim 9 as discussed above in paragraph 5.

WG1#11 in view of Applicant’s Specification does not disclose “signal codec adapted to act as a source of information to be transmitted over the telecommunication connection, and also adapted to transmit said upper-level scheduled silence-breaking transmissions at predetermined regular intervals during otherwise silent periods in a signal to be encoded in the signal codec”.

TS 26.093 discloses codec functionality for transmitting signal identifier description (SID) used for carrying comfort noise information to be used during the

Art Unit: 2461

silence period and transmitted at regular intervals during silent periods of discontinuous transmission (DTX) (§ A5.1.1., ¶6-7).

WG1#11 in view of Applicant's Specification and TS 26.093 are analogous art because they both deal with silent periods during discontinuous transmission.

It would have been obvious to one skilled in the art at the time the invention was made to use the signal codec of TS 26.093 with the method in WG1#11 in view of Applicant's Specification in order to transmit defined SID information as a dummy block during regular intervals in the silent period.

Allowable Subject Matter

8. **Claims 2-4** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2461

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIA L. SEKUL whose telephone number is (571)270-7636. The examiner can normally be reached on Monday - Friday 9:00-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MARIA L. SEKUL
Examiner
Art Unit 2461

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